SOWELL GRAY ROBINSON
Litigation + Business

FRANK R. ELLERBE, III
DIRECT 803 227.1112 **DIRECT FAX** 803 744.1556
fellerbe@sowellgray.com

February 15, 2018

VIA ELECTRONIC FILING

Ms. Jocelyn Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Dr., Suite 100
Columbia, SC 29210

RE: Duke Energy Progress, LLC - 2017 Meter Testing Results
Docket No. 1989-499-E

Dear Ms. Boyd:

Attached is Duke Energy Progress, LLC's 2017 Final Sample and Periodic Histograms and All Groups Summary Program Table as approved in Docket No. 1989-499-E, Order No. 90-131. The results represent combined North Carolina and South Carolina figures. In addition, copies of the results are being submitted to the SC Office of Regulatory Staff pursuant to 10.S.C. Code Ann. Reg. 103-370(1).

Thank you for your attention to this matter. If you have questions or require additional information, please let me know.

Yours truly,

Frank R. Ellerbe, III

FRE:tch

Enclosure

cc w/enc: Dawn Hipp, ORS-Utility Rates & Services Director (via email)
Shannon Hudson, ORS-Deputy Director-Legal Services (via email)
Conitsha B. Barnes, Regulatory Affairs Manager (via email)

Duke Energy Progress
2017 Watthour Meter Periodics
Watthour Meter Groupings

Group	Mfg.	Type(s)	Description	Test Plan	Sample Size	Population(as of selection time)	Sample Conclusion
843	Elster	A3	Three-phase, t-rated, demand and TOU	Periodic	290	4,396	Pass
846	ABB/ Elster	A1	Three-phase, t-rated, demand and TOU	Periodic	345	3,485	Pass
854	Landis & GYR	Focus RXR	Three-phase ,t-rated, demand and TOU with NIC module	Periodic	493	19,008	Pass

Duke Energy Progress
2017 Watthour Meter Samples
Watthour Meter Groupings

Group	Mfg.	Type(s)	Description	Test Plan	Sample Size	Population	Sample Conclusion
11	Elster	A1+	Single Phase, self-contained, demand and TOU	Double Sample Phase-I	170	1,611	Pass
12	Elster	A3	Single Phase, self-contained, demand and TOU	Double Sample Phase-I	165	5,657	Pass
16	Landis & Gyr	Focus AL	Single Phase, self-contained, with ERT Module	Double Sample Phase-I	165	3,326	Pass
20	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	168	3,678	Pass
21	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	172	305,716	Pass
22	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	165	33,467	Pass
23	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	166	242,214	Pass
24	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	176	225,513	Pass
25	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	168	244,343	Pass
26	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	165	115,436	Pass
27	Itron	Centron	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	165	206,656	Pass
30	General Electric	EV, I70,KV, KV2	Single Phase, self-contained, demand and TOU	Double Sample Phase-I	176	514	Pass

35	ABB/ Elster	A1	Single Phase self-contained, demand and TOU	Double Sample Phase-I	179	1,382	Pass
36	General Electric	I210	Single-phase, self-contained, with ERT Module	Double Sample Phase-I	165	10,473	Pass
43	Landis & Gyr	Focus AXR	Three-phase self-contained, demand and TOU	Double Sample Phase-I	165	4,574	Pass
44	Landis & Gyr	Focus AXR	Single-phase self-contained, demand and TOU	Double Sample Phase-I	174	23,780	Pass
46	Itron	Centron, Sentinel	Three-phase and network, self-contained with ERT Module	Double Sample Phase-I	165	40,284	Pass
47	Itron	Centron, Sentinel	Three-phase and network, self-contained with ERT Module	Double Sample Phase-I	165	11,161	Pass
51	Elster	A3	Three-phase and network, self-contained, demand and TOU	Double Sample Phase I	178	939	Pass
65	Elster	A3	Single-phase, self-contained, demand and TOU	Double Sample Phase I	185	2,084	Pass

Duke Energy Progress
Meter Classification Key

A break-down of the code used for the DEP meter classifications ** ** ** (12 34 56).

For example: SS *1 NI, would be a Solid-State meter either self contained or T-rated Non-initiating

For positions 12
ND = Non-Demand
TD = Thermal Demand
MD = Mechanical Demand
ED = Electronic Demand (hybrid)
TO = Time-of-use
TR = Transducer
SS = Solid-State meter
RE = Recorder
VV = Volt-Squared Hour
SD = Solid-State Demand
ST = Solid-State TOU
SP = Solid-State Prepay

For positions 34
S = Self contained
T = Transformer Rated
1 = Single Phase
3 = Three Phase

For Positions 56
NI = Non-Initiating
WI=With-Initiating

Duke Energy Progress

2017 FIELD PERIODIC

Watthour Meter Group P-843 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A3

PE Type Code(s): TK1,TK2,TK3,TK4,TK7,TK8,TK9,TL1,TL2,TL3,TL4,TL5,TL7,TL8,TL9,TM1,TM2,TM3, TM4,TM5,TM6,TM7,TM8,TM9,TN4,TN5,TN6,TN7,TN8,TO2,TO3,TO4,TO5,TO6,TO7,TO8, TO9,TP2,TP3,TP4,TP5,TP6,TP7,TP8,TP9,TQ1,TQ2,TQ3,TQ4,TQ5,TQ6,TQ8,TQ9,TR1, TR2,TR3,TR4,TR5,TR6,TR7,TR9,TS1,TS3,TS4

Meter Classification: S*T3*I

Methodology: Periodic Test

Population: 4396

Sample Size: 292

Weighted Average Test Summary

Mean: 99.916

Standard Deviation: 0.0704

Number of Test > 102%: 0

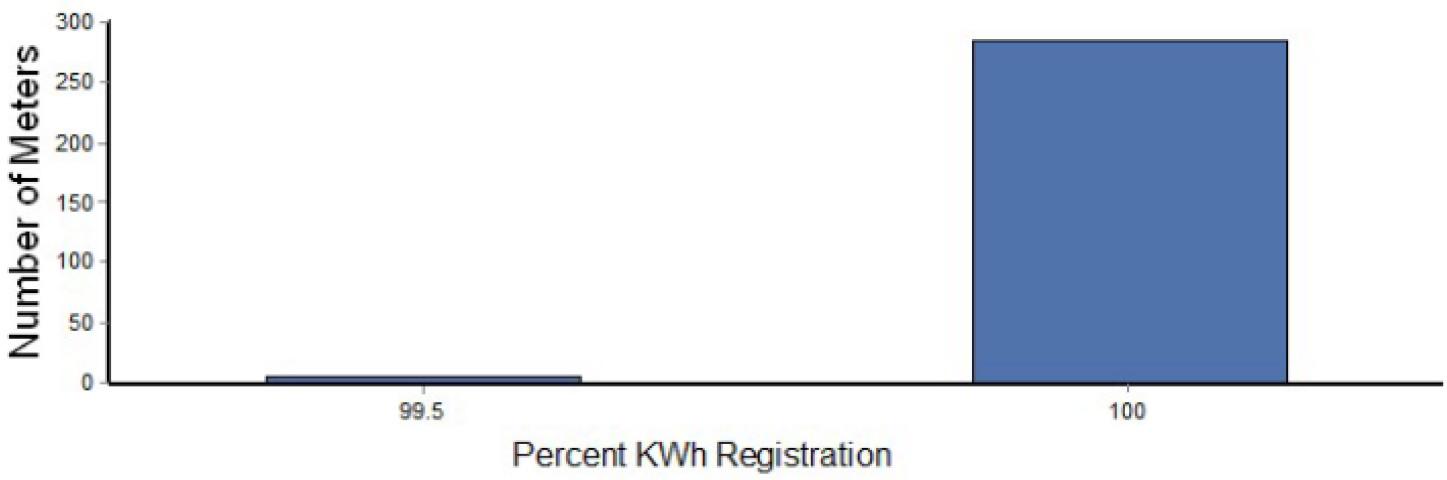
Number of Test 98 - 102%: 290

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Periodic test since the number of fast watthour meters is less than 5

Histogram of Group P-843 Meter Accuracies



Duke Energy Progress

2017 FIELD PERIODIC

Watthour Meter Group P-846 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A1,A3

PE Type Code(s): TA3,TA4,TA5,TA6,TA7,TA8,TC7,TC9,TD5,TD6,TD7,TD8,TF3,TF4,TF5,TF6,TH1,TH2, TH3,TH4,TH6,TH7,TH8,TH9,TJ1,TJ2,TJ3,TJ4,TJ5,TJ6,TJ8,TJ9,TN1,TN2

Meter Classification: S*T3*I

Methodology: Periodic Test

Population: 3485

Sample Size: 347

Weighted Average Test Summary

Mean: 99.906

Standard Deviation: 0.2697

Number of Test > 102%: 1

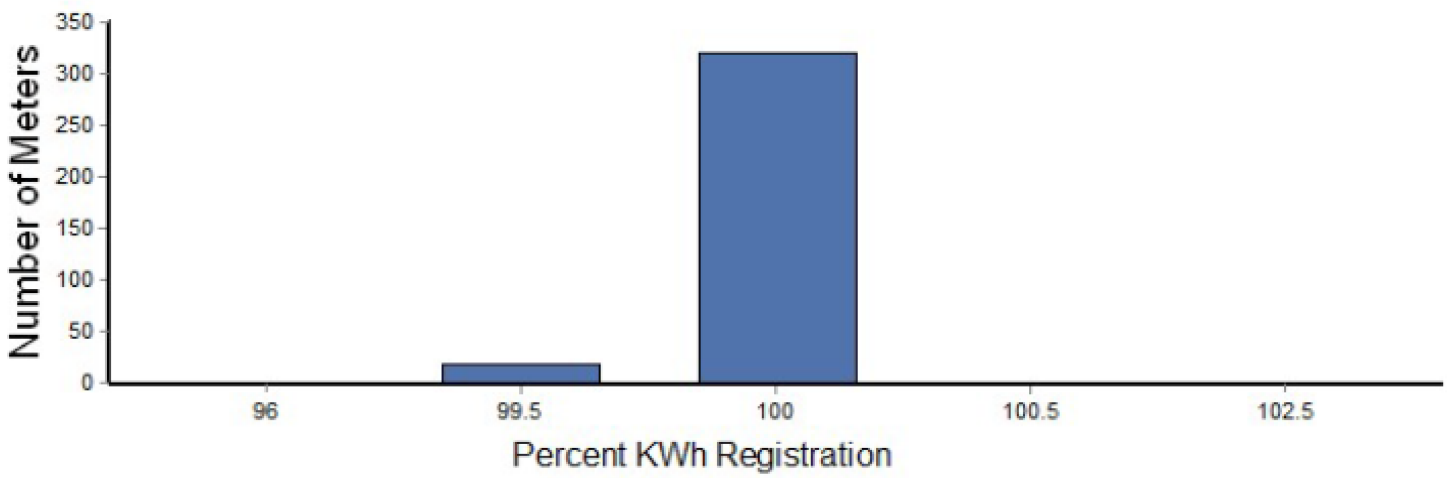
Number of Test 98 - 102%: 343

Number of Test < 98%: 1

Group Test Summary

This Group PASSES the Periodic test since the number of fast watthour meters is less than 6

Histogram of Group P-846 Meter Accuracies



Duke Energy Progress

2017 FIELD PERIODIC

Watthour Meter Group P-854 Summary

Group Information

Manufacturer: LANDIS & GYR/DUNCAN

Watthour Meter Type(s): FOCUS RXR

PE Type Code(s): K51

Meter Classification: STT3NI

Methodology: Periodic Test

Population: 19008

Sample Size: 501

Weighted Average Test Summary

Mean: 99.947

Standard Deviation: 0.115

Number of Test > 102%: 0

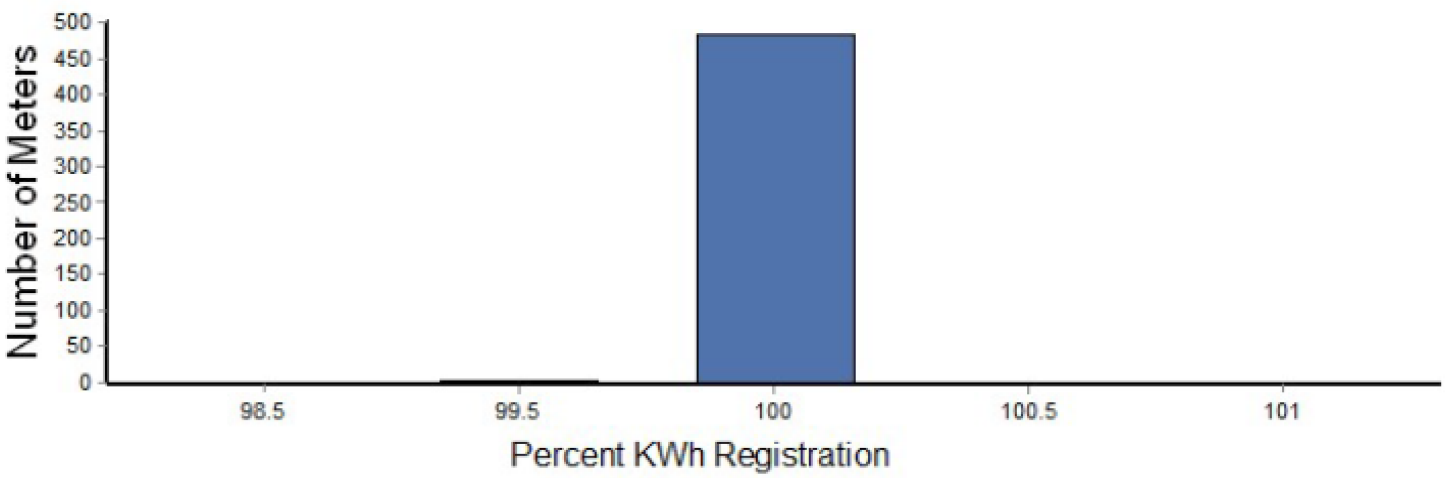
Number of Test 98 - 102%: 493

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Periodic test since the number of fast watthour meters is less than 10

Histogram of Group P-854 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-011 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A1+

PE Type Code(s): H38,H39,H40

Meter Classification: S*S1NI

Methodology: Double Sampling Ph 1

Population: 1611

Sample Size: 185

Weighted Average Test Summary

Mean: 99.88

Standard Deviation: 0.0751

Number of Test > 102%: 0

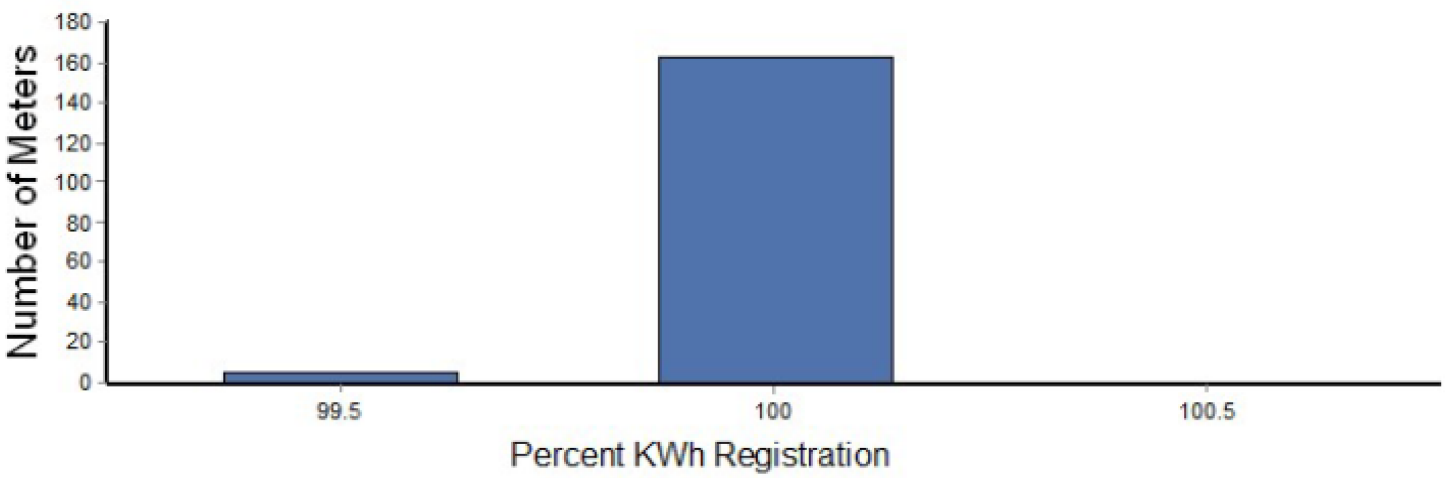
Number of Test 98 - 102%: 170

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-011 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-012 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A3

PE Type Code(s): H43,H44,H52,H53,H62

Meter Classification: S*S1NI

Methodology: Double Sampling Ph 1

Population: 5657

Sample Size: 184

Weighted Average Test Summary

Mean: 99.582

Standard Deviation: 4.7204

Number of Test > 102%: 0

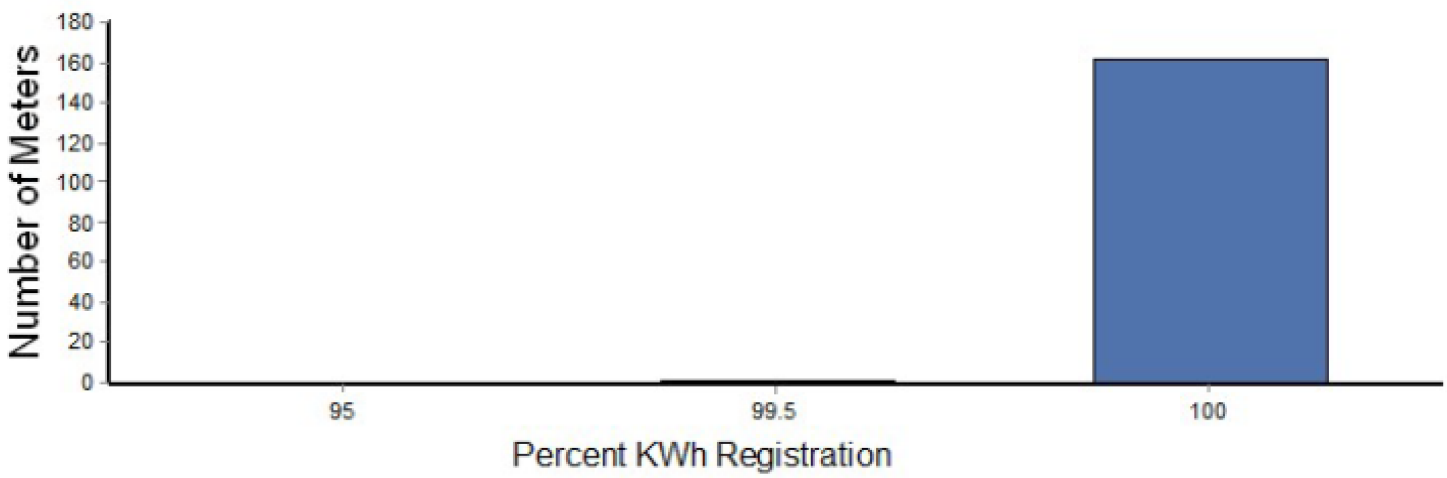
Number of Test 98 - 102%: 164

Number of Test < 98%: 1

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-012 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-016 Summary

Group Information

Manufacturer: LANDIS & GYR/DUNCAN

Watthour Meter Type(s): FOCUS AL

PE Type Code(s): D21

Meter Classification: SSS1NI

Methodology: Double Sampling Ph 1

Population: 3326

Sample Size: 185

Weighted Average Test Summary

Mean: 99.979

Standard Deviation: 0.0432

Number of Test > 102%: 0

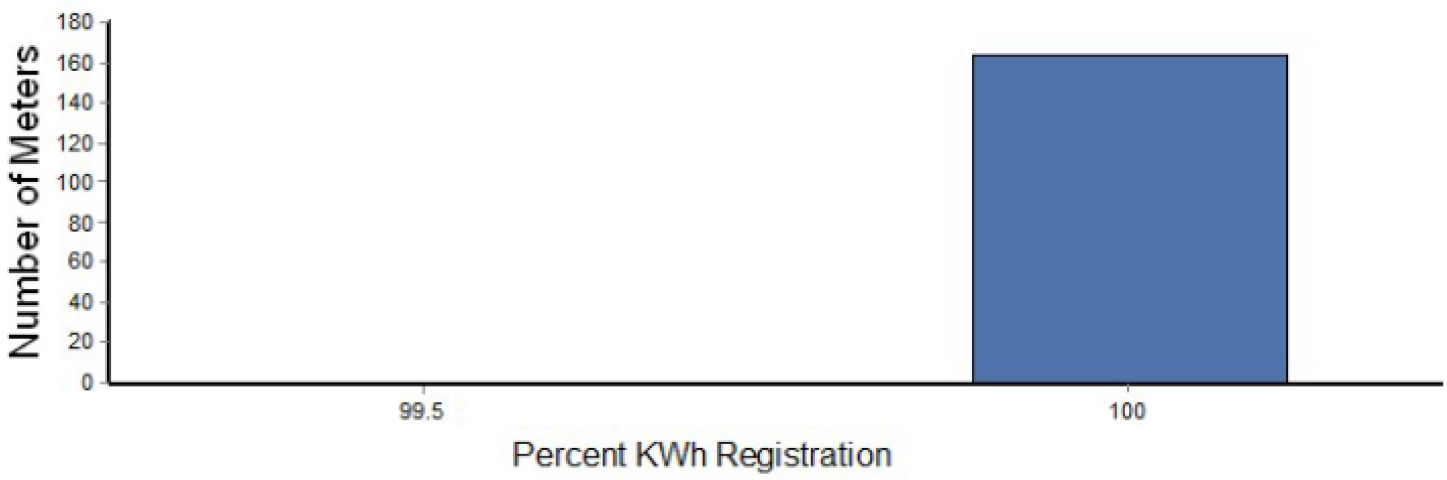
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-016 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-020 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): CENTRON

PE Type Code(s): S24

Meter Classification: SSS1NI

Methodology: Double Sampling Ph 1

Population: 3678

Sample Size: 185

Weighted Average Test Summary

Mean: 99.84

Standard Deviation: 0.1247

Number of Test > 102%: 0

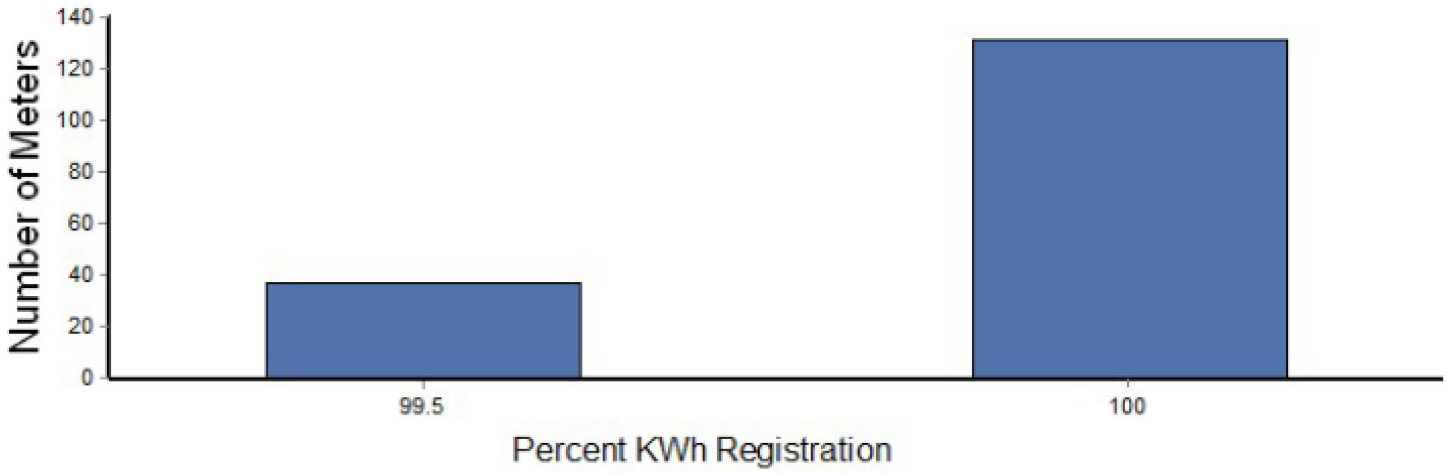
Number of Test 98 - 102%: 168

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-020 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-021 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): C1SR

PE Type Code(s): S25

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 305716

Sample Size: 185

Weighted Average Test Summary

Mean: 99.997

Standard Deviation: 0.1553

Number of Test > 102%: 0

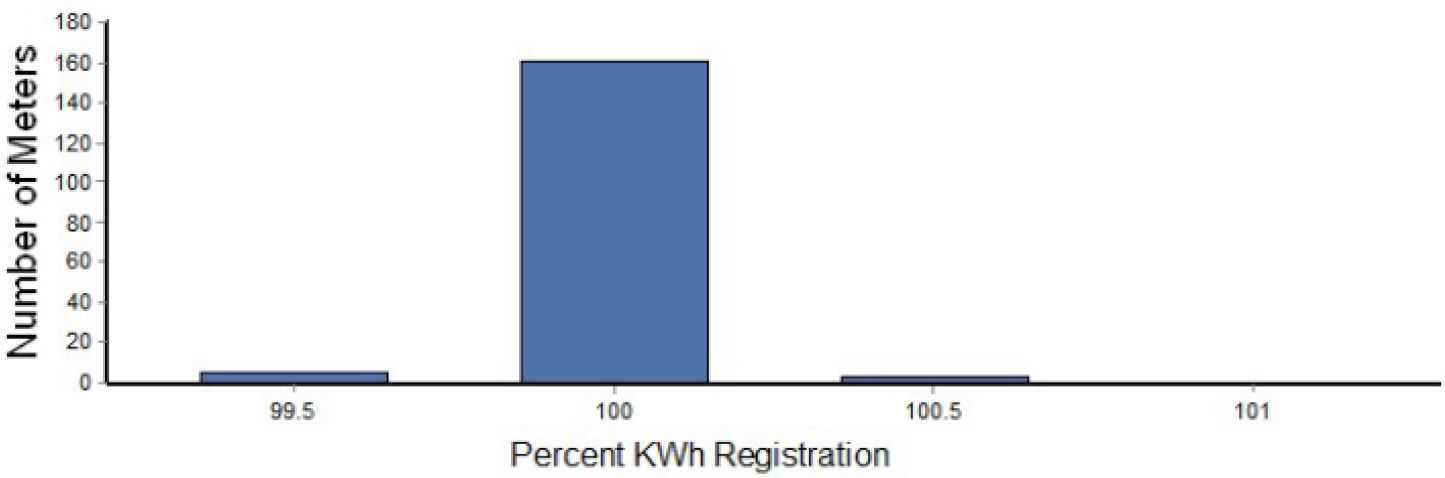
Number of Test 98 - 102%: 172

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-021 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-022 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): C1SR

PE Type Code(s): S26

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 33467

Sample Size: 185

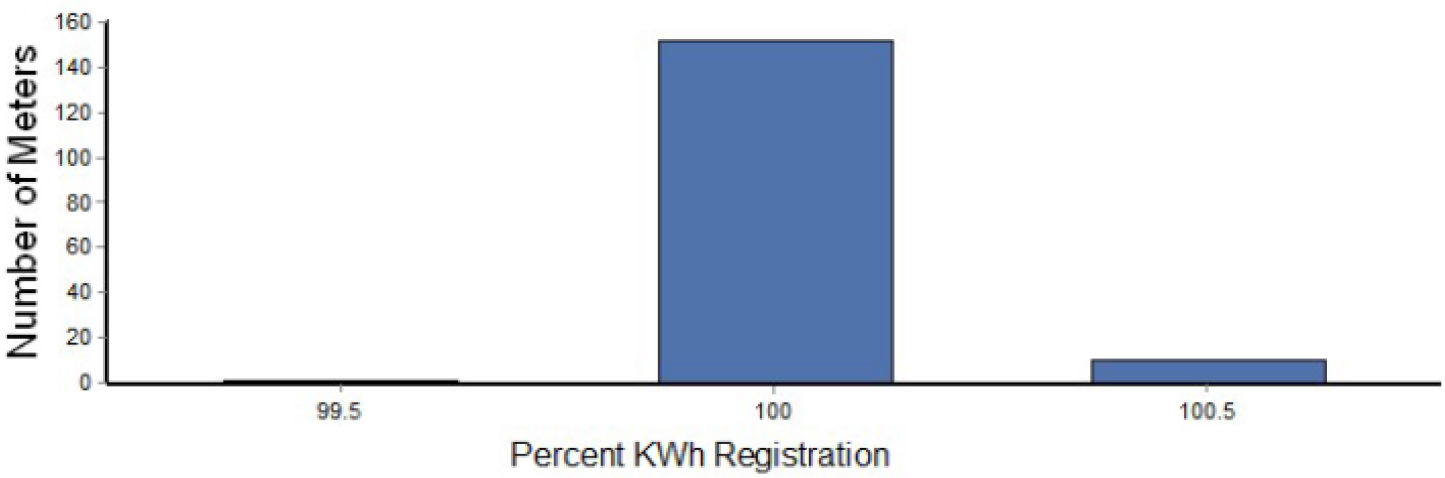
Weighted Average Test Summary

Mean:	100.043
Standard Deviation:	0.1288
Number of Test > 102%:	0
Number of Test 98 - 102%:	165
Number of Test < 98%:	0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-022 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-023 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): C1SR

PE Type Code(s): S27

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 242214

Sample Size: 185

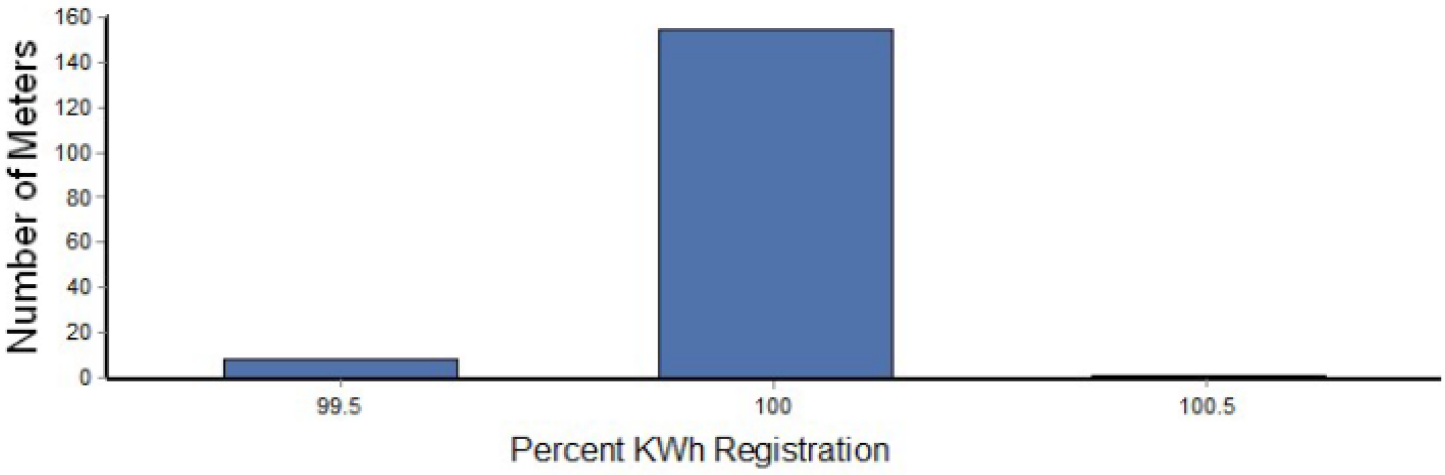
Weighted Average Test Summary

Mean:	99.955
Standard Deviation:	0.1174
Number of Test > 102%:	0
Number of Test 98 - 102%:	166
Number of Test < 98%:	0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-023 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-024 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): C1SR

PE Type Code(s): S28

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 225513

Sample Size: 185

Weighted Average Test Summary

Mean: 99.94

Standard Deviation: 0.1154

Number of Test > 102%: 0

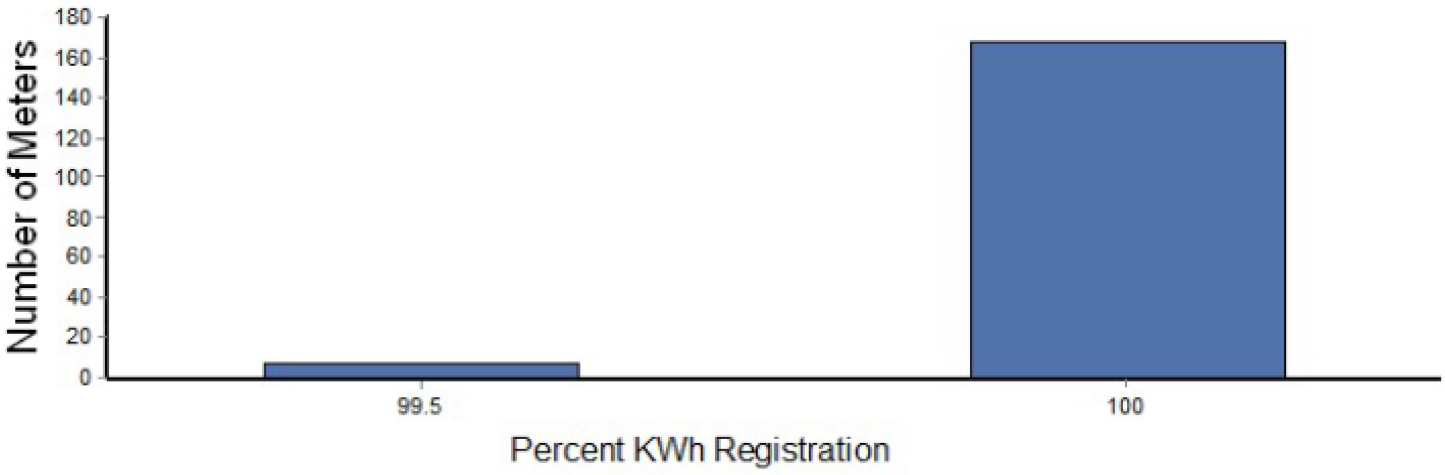
Number of Test 98 - 102%: 176

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-024 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-025 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): CENTRON (C1SR)

PE Type Code(s): S29

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 244343

Sample Size: 185

Weighted Average Test Summary

Mean: 99.913

Standard Deviation: 0.1045

Number of Test > 102%: 0

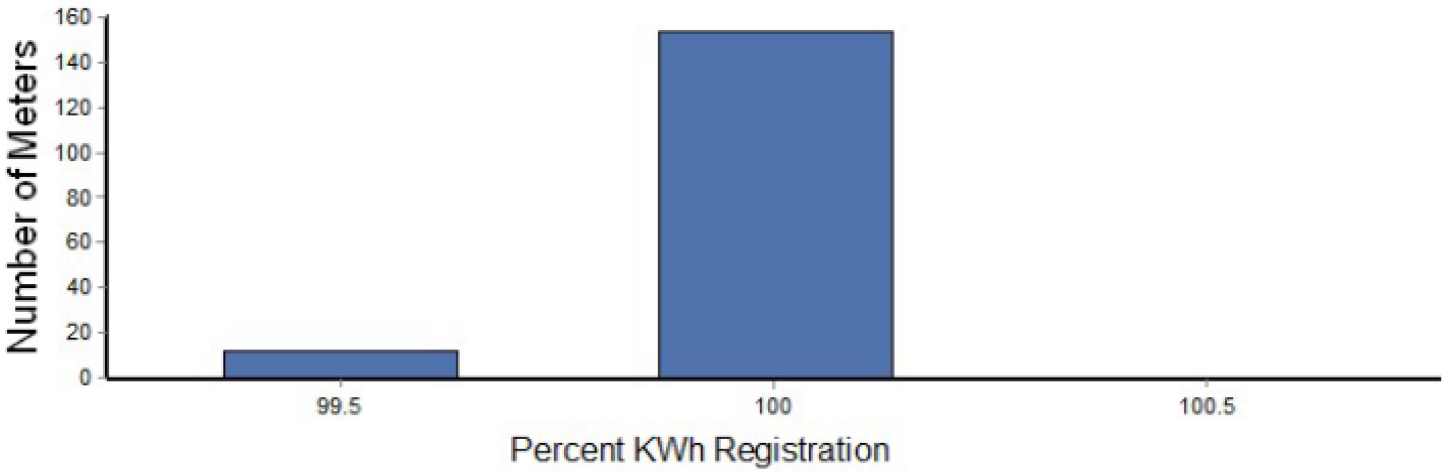
Number of Test 98 - 102%: 168

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-025 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-026 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): CENTRON (C1SR)

PE Type Code(s): S30

Meter Classification: SSS1NI MMR

Methodology: Double Sampling Ph 1

Population: 115436

Sample Size: 185

Weighted Average Test Summary

Mean: 99.907

Standard Deviation: 0.1141

Number of Test > 102%: 0

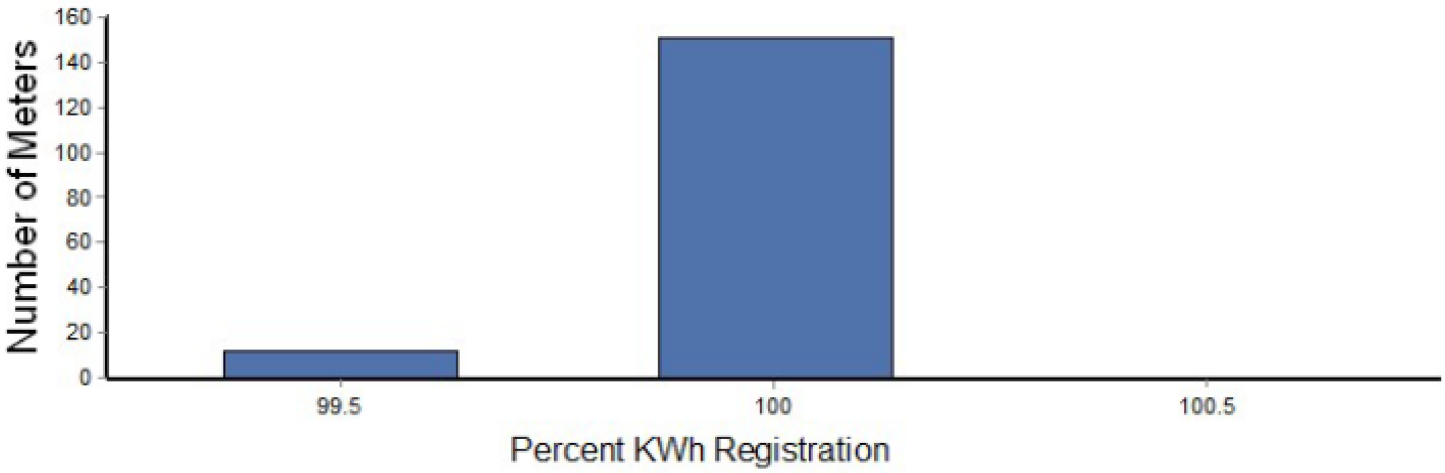
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-026 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-027 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): CENTRON (C1SR)

PE Type Code(s): S31

Meter Classification: SSS1NI

Methodology: Double Sampling Ph 1

Population: 206656

Sample Size: 185

Weighted Average Test Summary

Mean: 99.953

Standard Deviation: 0.1018

Number of Test > 102%: 0

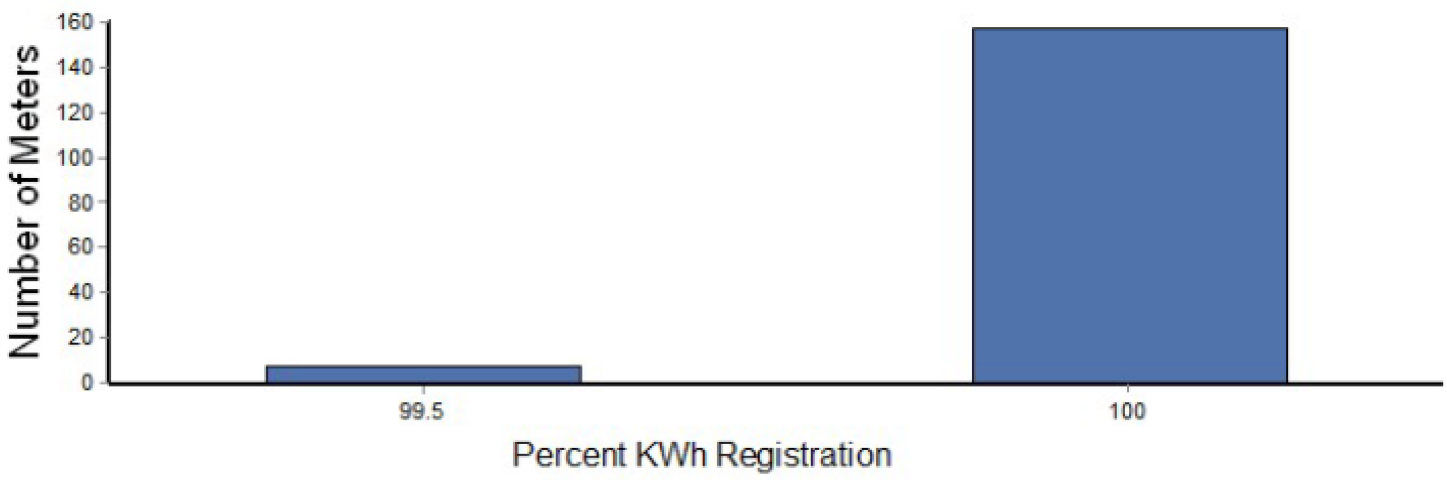
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-027 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-030 Summary

Group Information

Manufacturer: GENERAL ELECTRIC

Watthour Meter Type(s): EV,KV,KV2,I70

PE Type Code(s): E42,E43,E44,E45,E46,E47,E48,E49,E50,E51,E52,E53

Meter Classification: S*S1NI

Methodology: Double Sampling Ph 1

Population: 514

Sample Size: 183

Weighted Average Test Summary

Mean: 99.867

Standard Deviation: 0.0969

Number of Test > 102%: 0

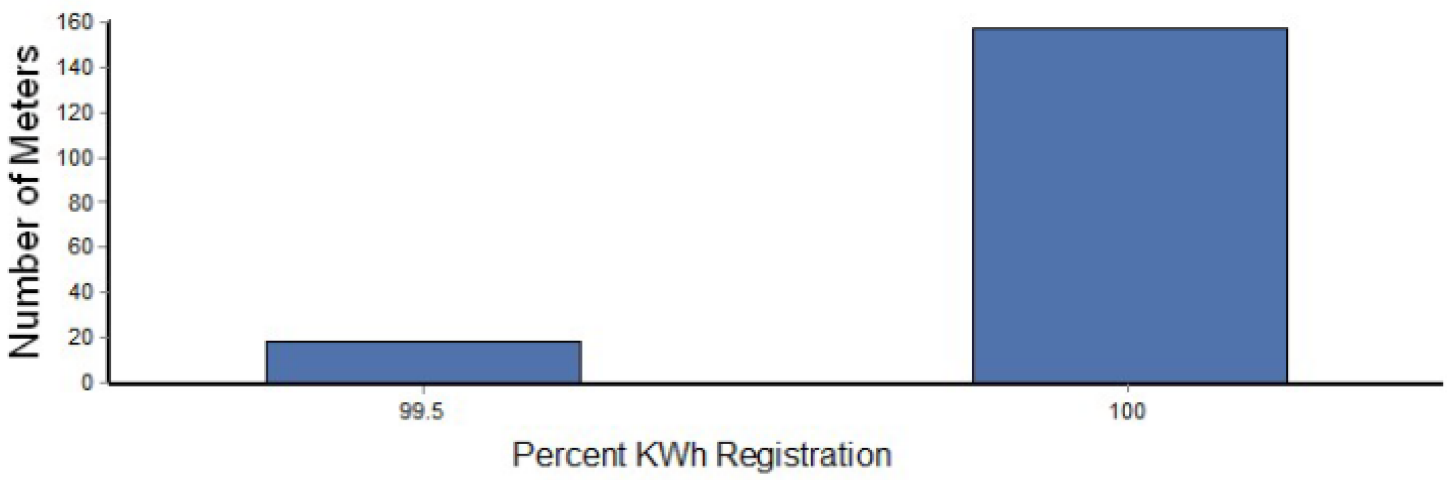
Number of Test 98 - 102%: 176

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-030 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-035 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A1

PE Type Code(s): H21,H22,H23,H24,H25,H30,H31,H32,H33,H34,H35,H36,H37

Meter Classification: S*S1*I

Methodology: Double Sampling Ph 1

Population: 1382

Sample Size: 184

Weighted Average Test Summary

Mean: 99.956

Standard Deviation: 0.0716

Number of Test > 102%: 0

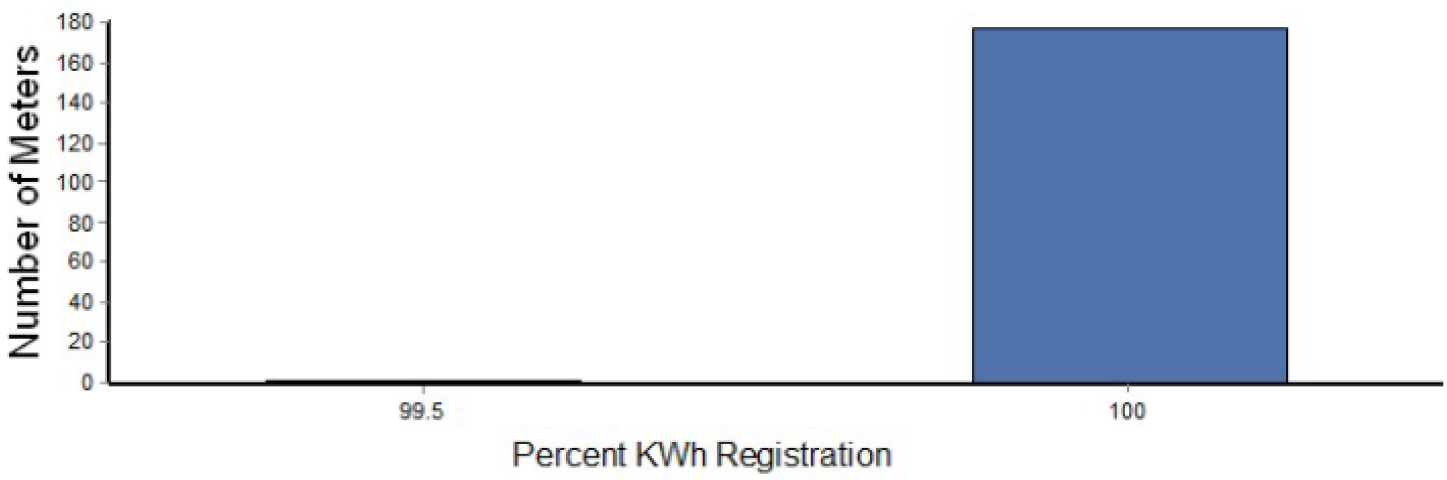
Number of Test 98 - 102%: 179

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-035 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-036 Summary

Group Information

Manufacturer: GENERAL ELECTRIC

Watthour Meter Type(s): I-210

PE Type Code(s): G42

Meter Classification: SSS1NI

Methodology: Double Sampling Ph 1

Population: 10473

Sample Size: 185

Weighted Average Test Summary

Mean: 99.965

Standard Deviation: 0.134

Number of Test > 102%: 0

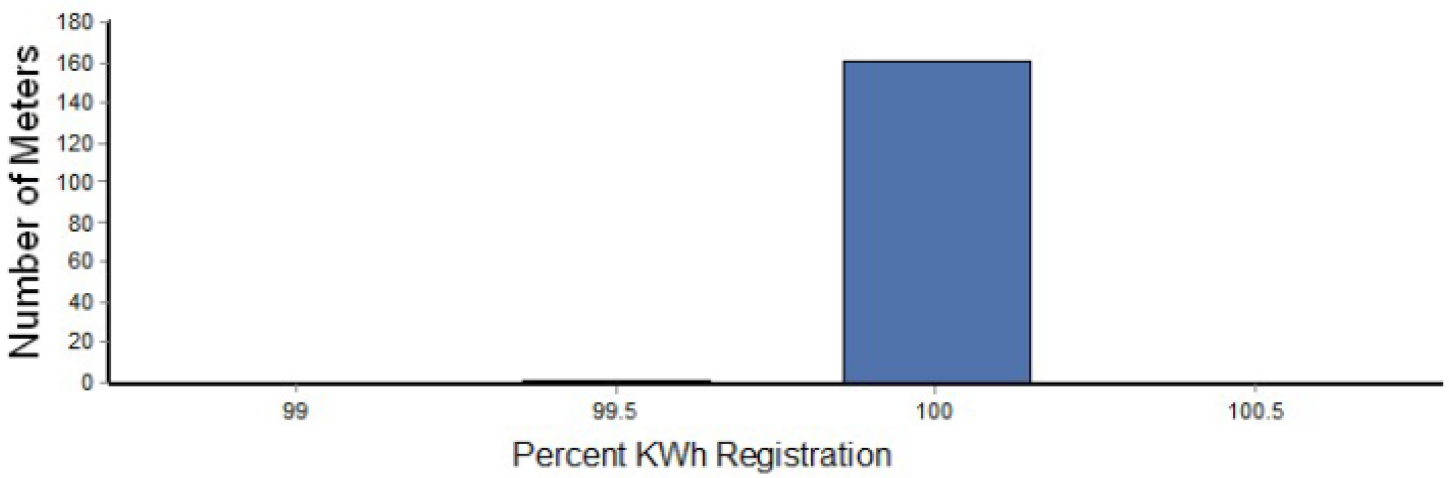
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-036 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-043 Summary

Group Information

Manufacturer: LANDIS & GYR/DUNCAN

Watthour Meter Type(s): FOCUS AXR

PE Type Code(s): C24

Meter Classification: STS3NI

Methodology: Double Sampling Ph 1

Population: 4574

Sample Size: 185

Weighted Average Test Summary

Mean: 99.956

Standard Deviation: 0.3413

Number of Test > 102%: 0

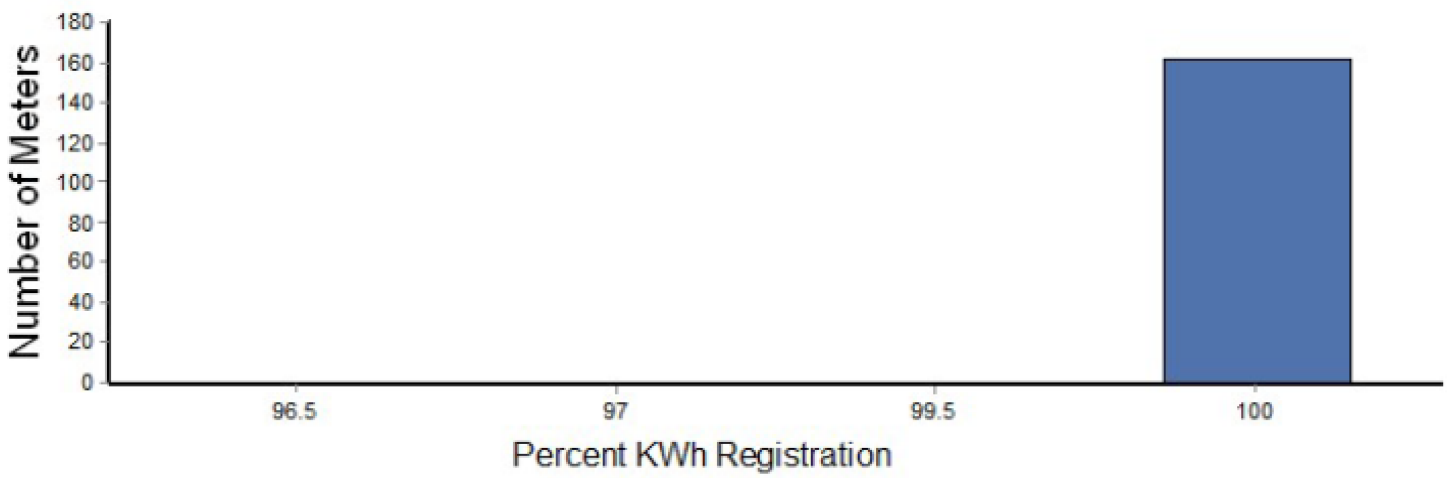
Number of Test 98 - 102%: 163

Number of Test < 98%: 2

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-043 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-044 Summary

Group Information

Manufacturer: LANDIS & GYR/DUNCAN

Watthour Meter Type(s): FOCUS AXR

PE Type Code(s): U19

Meter Classification: STS1NI

Methodology: Double Sampling Ph 1

Population: 23780

Sample Size: 185

Weighted Average Test Summary

Mean: 99.984

Standard Deviation: 0.0587

Number of Test > 102%: 0

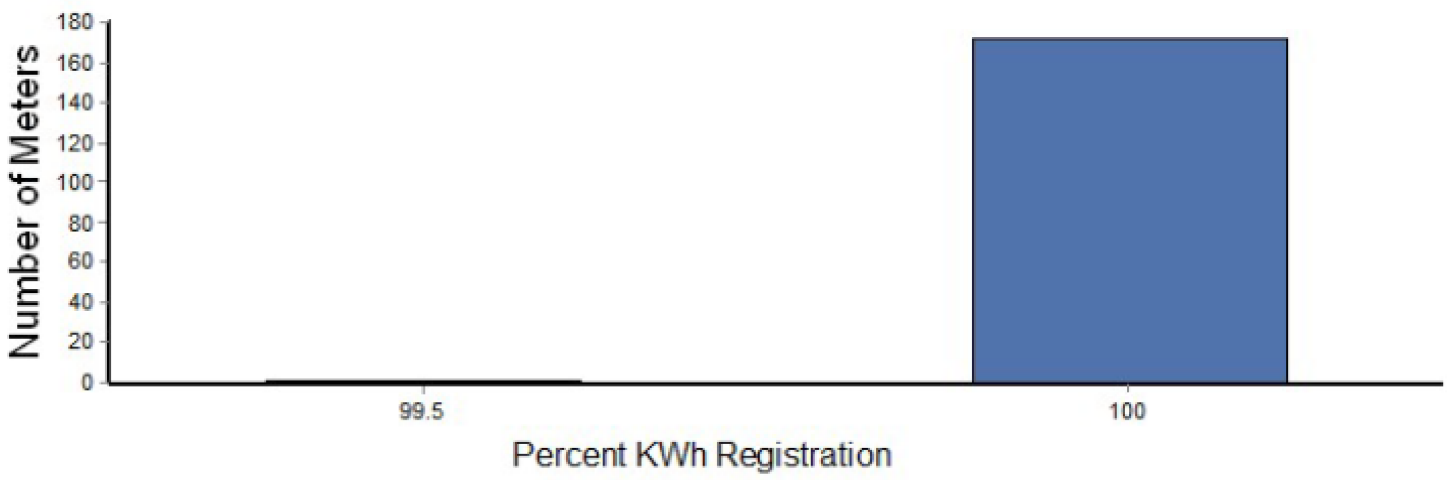
Number of Test 98 - 102%: 174

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-044 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-046 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): CENTRON

PE Type Code(s): N16,N18,N19

Meter Classification: SSS*NI

Methodology: Double Sampling Ph 1

Population: 40284

Sample Size: 185

Weighted Average Test Summary

Mean: 99.988

Standard Deviation: 0.0861

Number of Test > 102%: 0

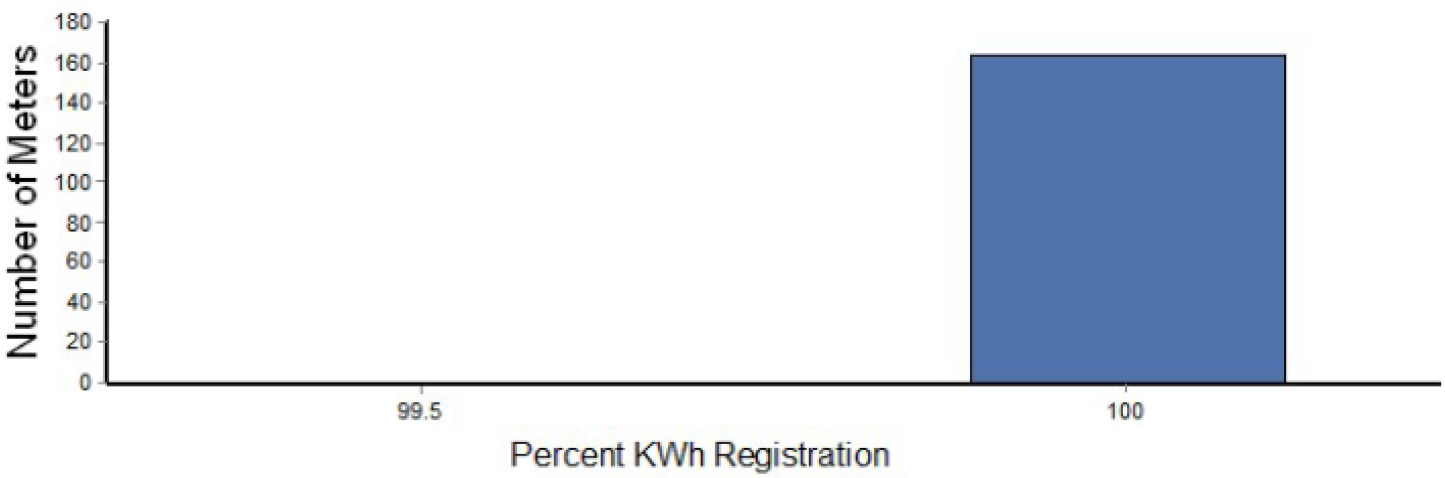
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-046 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-047 Summary

Group Information

Manufacturer: ITRON

Watthour Meter Type(s): SENTINEL

PE Type Code(s): N17

Meter Classification: SSS3NI

Methodology: Double Sampling Ph 1

Population: 11161

Sample Size: 185

Weighted Average Test Summary

Mean: 100.019

Standard Deviation: 0.071

Number of Test > 102%: 0

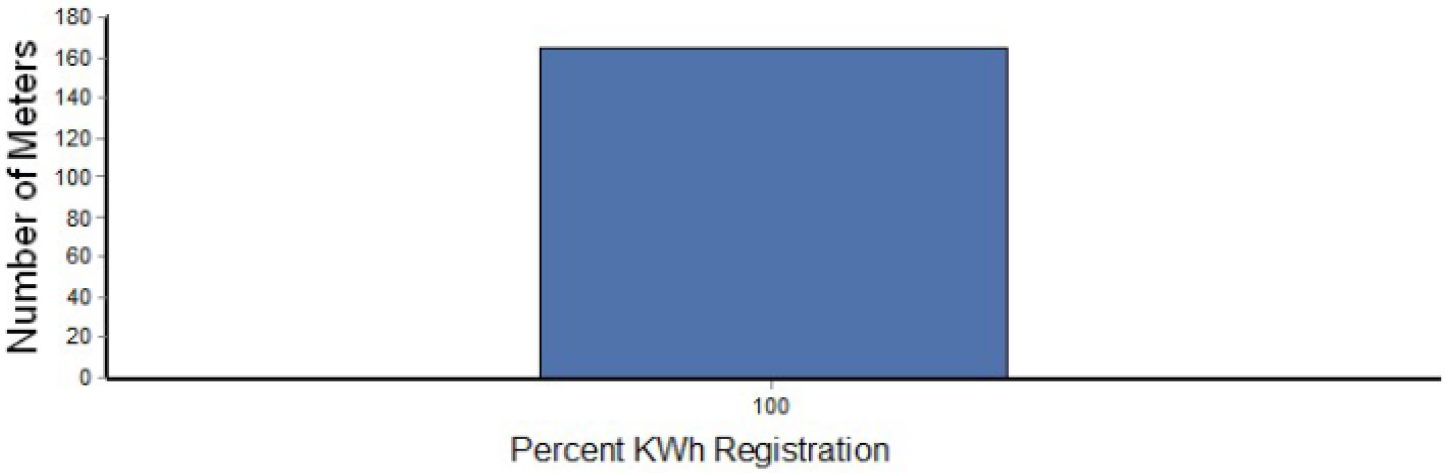
Number of Test 98 - 102%: 165

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-047 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-051 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A3

PE Type Code(s): Y72,Y73,Y74,Y75,Y76,Y77,Y78,Y79,Y80,Y81,Y82,Y83,Y84,Y85,Y86,Y87,Y88,Y89

Meter Classification: S*S**I

Methodology: Double Sampling Ph 1

Population: 939

Sample Size: 184

Weighted Average Test Summary

Mean: 99.971

Standard Deviation: 0.0417

Number of Test > 102%: 0

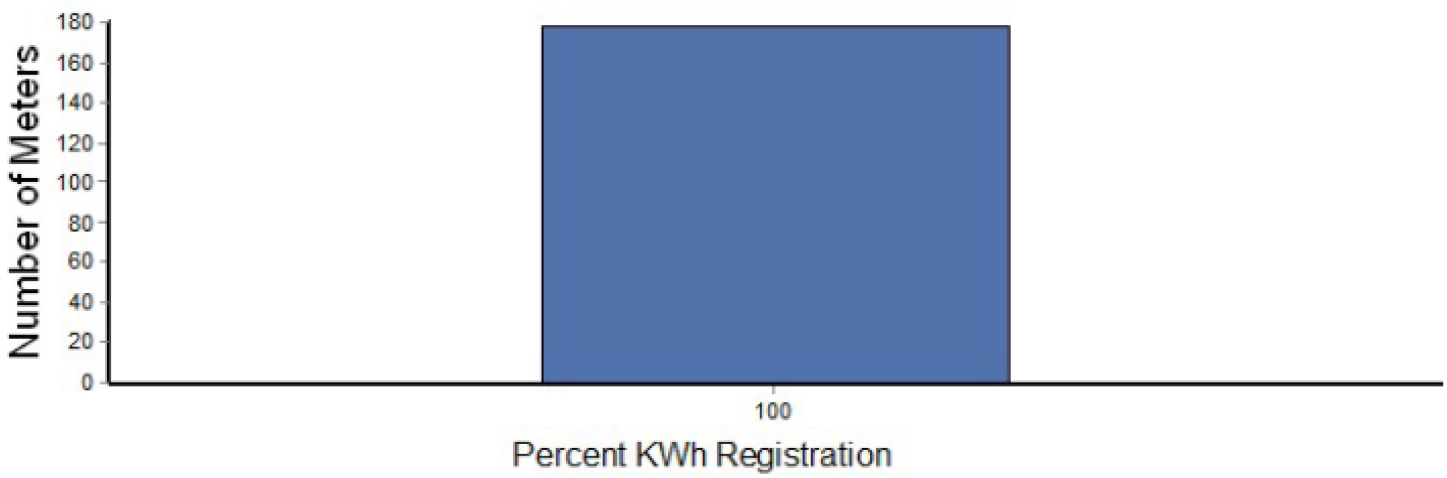
Number of Test 98 - 102%: 178

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-051 Meter Accuracies



Duke Energy Progress

2017 SELECTIVE SAMPLE

Watthour Meter Group S-065 Summary

Group Information

Manufacturer: ELSTER/ABB/WESTINGHOUSE

Watthour Meter Type(s): A3

PE Type Code(s): H42,H45,H46,H47,H48,H49,H50,H51,H54,H55,H56,H57,H58,H59,H60,H61

Meter Classification: STS1*I

Methodology: Double Sampling Ph 1

Population: 2084

Sample Size: 185

Weighted Average Test Summary

Mean: 99.998

Standard Deviation: 0.0348

Number of Test > 102%: 0

Number of Test 98 - 102%: 185

Number of Test < 98%: 0

Group Test Summary

This Group PASSES the Sample test since the number of fast watthour meters is less than 2

Histogram of Group S-065 Meter Accuracies